NORTH AMERICA. No. 1 (1875).

CORRESPONDENCE

i/Great Gritain 2/Parliament RESPECTING THE

DETERMINATION OF THE NORTH-WESTERN

BOUNDARY

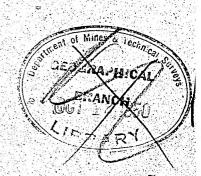
BETWEEN

CANADA AND THE UNITED STATES.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:

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### LIST OF PAPERS.

No. : '					Pag
1. Captain Cameron, R.A., to the Earl of Derby		••	••	November 3,	
2. The Earl of Derby to Captain Cameron, R.A	• •••			January 13, 1	875

### Correspondence respecting the Determination of the North-Western Boundary between Canada and the United States.

No. 1.

### Captain Cameron, R.A., to the Earl of Derby.—(Received December 1.)

My Lord, Dufferin, Manitoba, Canada, November 3, 1874.

I HAVE the honour to report the progress made in carrying out my duties as

Boundary Commissioner.

The international boundary line—between the United States and Canada—from the most north-west point of the Lake of the Woods, due south to the parallel of 49° of north latitude, and thence westward to the "Stony" or Rocky Mountains, has been determined in accordance with the IInd Article of the Convention of London, 20th October, 1818.

2. A party is now engaged in placing iron pillars along the line of the meridian of the most north-west point of the Lake of the Woods, southward to the point where the

line enters the lake, and in which it intersects the parallel of 49° north latitude.

3. From the western shore of the lake, for a distance of about 55 miles along the parallel of 49° north latitude, the country being very swampy, is inaccessible, except Preparations have been made for placing iron pillars on such available sites as there are, when access can be gained to this portion of the line.

4. Westward from the swamp district just referred to, for a distance of 115 miles along the south of the Province of Manitoba, to its western boundary, iron pillars have

been placed at 2 mile intervals.

5. Westward from Manitoba to the eastern end of the international boundary previously run and marked from the Pacific coast, the line is indicated by cairns, generally about 3 miles apart.

6. With the exception of about 19 miles at the western end of the line, the whole has

been cleared of trees.

7. The western end of the line traverses impracticable ground in the Rocky Mountain ranges; and in this length of 19 miles it was considered sufficient to mark only two

points, viz., the passage of Belly River, and the crossing of Lake Waterton.

8. To provide for the possible disappearance of monuments, and the definition of the line in intervening spaces, the United States' Commissioner has agreed with me in deciding that the line in traversing these spaces, shall be held to run from point to point of astronomically determined 49° north latitude, following the course of a line having the curvature due to a parallel of that latitude.

8. The Chief Astronomer, his two assistants, and six Royal Engineers have proceeded to Ottawa, where public office accommodation has been placed at their disposal, to

complete maps and office work generally.

A surveyor, temporarily employed here on a Committee of Audit, is about to join the

party at Ottawa.

9. The remainder of the detachment of Royal Engineers who were employed in surveying, has been disposed of by discharge from the service, or by remission to garrison duties at Halifax, Nova Scotia. Authority for this arrangement was received from the Horse Guards.

10. The services of the staff and employes generally are being dispensed with as

rapidly as the public interests permit.

11. Provision having necessarily been made for the possibility of the field work being continued beyond the present season, there remains on hand a larger stock of supplies than can be disposed of immediately without incurring a loss which may be avoided by a The real property-land and buildings-here, belonging to the more gradual sale. Commission, is too valuable to be disposed of hastily. The prospect—from the opening : **[209**]

of railway-communication with the United States next year-of a considerable rise in the value of all real estate in this Province is very good, and especially so in the case of such as has the advantages of location offered by the site of the expedition winter quarters.

12. Under the circumstances I have concluded that the interests entrusted to my

charge may be best served by my remaining here during the winter.

13. I have contemplated sending the Secretary to England, in order that, by placing himself in immediate communication with the War Office, the final closing of the Commission accounts may be facilitated and expedited. Should this arrangement be approved of, the Secretary would proceed to London as soon as he has closed his work here, and has had the leave of absence which his arduous duties have, I regret to say, rendered necessary, and to which his unremitting zeal and application have so well entitled him.

I have, &c. D. R. CAMERON, Captain R.A., (Signed) Her Majesty's Commissioner.

#### No. 2.

### The Earl of Derby to Captain Cameron, R.A.

Foreign Office, January 13, 1875. I HAVE had under my consideration, in communication with Her Majesty's Secretaries of State for the Colonies and for War, your despatch of the 3rd of November, reporting the completion of the tracing of the boundary line from the Lake of the Woods to the Rocky Mountains, and the arrangements which you propose to make for winding up the business of the Commission, and I have to state to you that your proceedings are approved by Her Majesty's Government, and that you are authorized to remain in Canada during the winter, and to send the Secretary home to assist in closing the accounts.

I am, &c. DERBY. (Signed)



NORTH AMERICA. No. 1 (1875).

CORRESPONDENCE respecting the Determination of the North-Western Boundary between Canada and the United States.

Presented to both Houses of Parliament by Command of Her Majesty. 1875. 8

NORTH AMERICA. No. 8 (1876).

### FURTHER CORRESPONDENCE

RESPECTING THE

# DETERMINATION OF THE BOUNDARY

BETWEEN

## CANADA AND THE UNITED STATES.

(In continuation of "North America No. 1, 1875.")

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:

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### Further Correspondence respecting the Determination of the Boundary between Canada and the United States.

Major Cameron, R.A., to the Earl of Derby.—(Received June 16.)

Office of the North American Boundary Commission,

My Lord,

London, June 15, 1876. I HAVE the honour to forward herewith a record of the proceedings at my last meeting with Mr. Archibald Campbell, the United States' Commissioner appointed to act with me in ascertaining and marking the boundary from the most north-western point of the Lake of the Woods to the Rocky Mountains between the territories of Her Majesty and those of the United States.

2. The Record consists of—

(A.) A detailed list of the astronomical stations at which observations were taken, and whence the exact position of the line was deduced.

(B.) A detailed descriptive list of 388 marks placed on the line.

(c.) A set of twenty-four maps\* (exclusive of an index sheet) on a scale of one inch to two miles, embracing an area of over 9,000 square miles, illustrating topographical features in detail, and indicating the positions of the astronomical stations

and of the marks on the line.

- (p.) A Minute that the marks above referred to are accepted by Mr. Campbell and myself as being on the line defined by the 2nd Article of the Convention of London, signed on the 20th October, 1818, that we agree that between any two neighbouring marks the boundary is a line having the curvature of a parallel of 49 degrees north latitude, and that, in the event of any mark placed on the line being obliterated beyond recognition, its lost site is to be recovered by reference to its recorded position relatively to the nearest unobliterated mark or marks.
- 3. These documents, including the maps, have been made in duplicate, and signed by both Mr. Campbell and myself; one copy I now forward to your Lordship, the other has been retained by Mr. Campbell for delivery to the Government of the United States.
- 4. Of the 388 marks placed on the boundary line there are eight in an extensive swamp, between thirty-three and forty-two miles west from the Lake of the Woods, which are of a comparatively temporary character. The softness of the subsoil precluded the placing of permanent monuments by the expedition in the swamp, and the marks here consist of a collection of forty-feet poles driven down twenty feet. It will probably be considered unnecessary to maintain these, or to incur the great expense which would be involved in substituting permanent marks in
- 5. The iron pillars referred to in the accompanying list should be coated at intervals of a few years; to preserve them from corrosion, and the cairns and earthen mounds should be inspected periodically with a view to repairing such of them as may need it.

I have, &c.

D. R. CAMERON, Major, R.A., (Signed) Her Majesty's Commissioner.

These Maps are in the Foreign Office Library.

#### Inclosure 1.

(A.) List of the Astronomical Stations observed by the Joint Commission for the determination of the International Boundary Line from the North-West Angle of the Lake of the Woods to the Rocky Mountains.

_ <del></del>	[-	T .	T	
No.	Name of the Astronomical Station.	Distance from Lake of Woods	Largitude West of	Remarks.
140.	Name of the Astronomical Station.	Station.	Greenwich.	
		Dillion.		
		Miles. Links.	0 1 11	
***	North-West Angle	MITTES. LIMAS.	95 08 39 7	Latitude 49° 22' 19.137!
1	Lake of the Woods (joint)	0 0	95 16 55 3	
$\tilde{2}$	Pine River	31 7,205	95,59 01.1	
3	West Roseau Ridge	68 1,283	96 46 51 9	1
4 .	Red River (joint)	88 4,936	97 13 51 5	(.
5 .	Pointe de Michel (joint)	108 5,962	97 40 25 2	, i
6	Pembina Mountain, East (joint)	124 2	98 00 33	
7	Pembina Mountain, West	135 6,307	98 16 06:3	
8 '	Long River	165 1,305	98 54 52 1	
. 9	Sleepy Hollow	183 3,911	99. 19 02.4	
10	Turtle Mountain, East	203 7,729	99 46 04 3	
· 11	Turtle Mountain, West	238 1,510	100 31 13 9	
412	1st Souris (or Mouse River)	258 744	100 57 29 8	and the second
13	South Antler	281 1,973	101 28 03	
.14	2nd Souris (or Mouse River)	303 7,150	101 57 56.1	, `
. 15	United States' No. 8 Astronomical Station	325 3,846	102 26 25 2	
16	Short Creek	343 2,892	102 50 00 9	
ì7 .	3rd Mouse River	359 3,254	103 11 11.8	, .
. 18	Grand Coteau	377 2,977	103,34 53.7	· · ·
19.	Mid Coteau	400 4,925	104 05 34	•
20	Big Muddy	426 5,035	104 39 53.6	
21.	Bully Spring	451 1,841	105 12 21 4	
22	Poplar River	473 3,454	105 41 39 2	
23	West Poplar	496 6,906	106 12 34 4	
24	Little Rocky	522 4,742	106 46 31 5	
25	Frenchman's Creek	550 6,740	107 23 48 2	
26	Cottonwood Coulé	567 3,881	107 45 45 9	
27	Pool on Prairie	588 1,931	108 13 09 2	
28	Near Goose Lake	615 3,202	108 48 59 6	
29	East Fork	642 218	109 .24 . 27 . 8	
30	West Fork	655 2,357	109 41 38 2	
31	Milk River Lake	677 281	110 10 19 5	
32	Milk River	702 3,023	-110 43 46 1	
33	East Butte	723 383	111 11 02 5	
34	West Butte	739 . 5,770	111 33 02 6	and many the contract of the c
35	Red Creek	760 3,160	112 00 19.5	•
.36	2nd Milk River (or South Branch)	785 0,279	112 32 50 3	
37	North Branch, Milk River	804 3,361	112 58 25 2	• .
38	Rocky Mountains	825 6,138	113 26 35 3	
39	Belly River	836 3,385	113 40 39	
40	Chief Mountain Lake	846 240	113 53 19.7	
1	Akamina	853 2,529	114 02 56 5	Observed by the Joint Com-
<u> </u>		ļ		mission, 1861.

(Signed)

D. R. CAMERON, Major, R.A., Her Britannic Majesty's Commissioner. ARCHIBALD CAMPBELL, United

States' Commissioner. W. J. TWINING, Captain of Engineers, United States' Chief Astronomer. S. ANDERSON, Captain, R.E.,

British Chief Astronomer.

May 29, 1876.

### Inclosure 2.

# (B.) List of the Monuments marking the International Boundary Line from the North-West Angle of the Lake of the Woods to the Rocky Mountains.

### Monuments Marking due South Line.

es. Links.		0 1 11	
• •	Not marked	95 08 57.7	North - west point in swamp. Latitude 49° 23′ 50.3″.
3,071 7,001	Iron pillar	95 08 57·7 95 08 57·7	Latitude 49° 22′ 38.2″. Latitude 49° 22′ 12.6″. North of Dawson Road.
2,797 3,626 945 1,882	Granite cairn	95 08 57-7 95 08 57-7 95 08 57-7 95 08 57-7	Latitude 49° 21′ 47·8″.  Latitude 49° 20′ 50·4″.  Latitude 49° 19′ 23·6″.  Latitude 49° 18′ 25·4″.  Latitude 49° 17′ 17·2″.
	3,626 ·· 945	3,626 945 1,882 Granite cairn	3,626 95 08 57·7 945 95 08 57·7 1,882 Granite cairn 95 08 57·7

<sup>\*</sup> Indicates that an iron tablet was buried 2 feet deep and 10 feet east of the Monument, and † indicates that an iron tablet was buried also in the centre of the monument.

,	1	1 -t		, , , , , , , , , , , , , , , , , , , ,	
	Distance			Longitude	
No.	from Lake of	Nature of Monument.	٠ ا	West of	Remarks.
140.	the Woods.	Tyanaro or Incomment.		Greenwich.	
	the woods.			oreenwicu.	
				0 1 11	
	Miles, Links.			٠,٠	
٠1		Stone cairn, 71 ft. by 8 ft.	• •	95 16 55·3	Lake of the Woods Astronomical
	1		- 1		Station.
. 2	3 ,0	Earth mound, 7 st. by 14 st.		95 20 52.8	
. 3	5 0	7 ft. by 14 ft.		95 23 31.1	
4 ^	9 0	Iron pillar		95 28 47.8	
. 5	12 0	Earth mound, 7 ft. by 14 ft.		95 32 45.4	
6.	15 0	7 ft. by 14 ft.		95 36 42 9	
7	17 0	Iron pillar		95 39 21.2	East of North-east Rosean Cross-
•.	1.	,	. **		ing.
8	18 2,080	Earth mound, 7 ft. by 14 ft.	- 1	95 41 01 0	
9	21 0	Iron pillar	•••	.95 44 37.9	
			•••	95 48 50.8	
10	24 1,548	Earth mound, 7 ft. by 14 ft.			On ridge.
11	25 6,804	Iron pillar	•••	95 51 02.0	
12	29 0	Earth mound, 7 ft. by 14 ft.	•••	95 55 11.3	At Pine River.
13	30 0	,, 7ft. by 14ft.	• • • •	95 56 30.5	
14	32 5,154	" 7 ft. by 14 ft.	••	96 00 00	Marking eastern boundary of
			1	00 01 10 0	Manitoba.
15	33 4,936	,, 10 ft. by 6 ft.	•••	96 01 16.9	T G ' B S
16	34 4,936	Timber	•••	96 02 36.0	In Great Roseau Swamp.
17	35 4,936	,,	••	96 03 55.2	Ditto.
- 18	36 4,936	,,	•••	96 05 14.4	Ditto.
19 .	37 4,936	,,	• • •	96 36 33.6	Ditto.
-20-	38 4,936	· · · · · · · · · · · · · · · · · · ·		96 07 52.7	Ditto.
21	39 4,936	,,		96 09 11·9	Ditto.
22	40 4,936	99		96 10 31 1	Ditto.
. 23	41 4,936	99	•.	96 11 50.2	Ditto.
24	42 5,519	Iron pillar		96 13 15.2	, ,
25	43 4,936	Earth mound, 10 ft. by 6 ft.		96 14 28.5	
<b>26</b>	44 5,519	Iron pillar		96 15 53 6	
27 27	45 4,936	Earth mound, 10 ft. by 6 ft.		96 17 06.9	, a
28	46 5,519	Iron pillar	1	96 18 31 9	100x 111
	47 4000	Earth mound, 10 ft. by 6 ft.	•••	96 19 45 3	
29	47 4,936			96 21 10 3	Near 40 mile station.
30	48 5,519	Iron pillar	•••	96 22 23.6	Treat to mine bequoin 3
31	49 4,936	Earth mound, 10 ft. by 6 ft.	•••		,
32	50 5,519	Iron pillar	•••	96 23 48 6	
33	51 4,936	Earth mound, 10 ft. by 6 ft.	•••	96 25 02 0	
. 31	52 5,519	Iron pillar	••	96 26 27.0	·
35	53 4,936	Earth mound, 10 ft. by 6 ft.	•••	96 27 40 3	
36	54 5,519	Iron pillar		96 29 05 3	East of Pointe d'Orme.
. 37	55 5,519	25 *4 **	· }	96 30 24 5	West of Pointe d'Orme. Be-
-			· }		tween 37 and 38 the Roseau
			- 1		River, at Pointe d'Orme,
	12 ·		(	- !	crosses the line three times

				<del></del>
No.	Distance from Lake	f Nature of Monument.	Longitude West of	Remarks.
<del>,</del>	the Woods	** •• • • • • • • • • • • • • • • • • •	Greenwich.	
	ļ		, ,	
40	Miles, Link 58 5,519		96 34 22 0	
41	59 5,519		96 35 41 2	
42	60 5,519		96 37 00 4	
43			96 38 19 5 96 39 38 7	
44 45	62 5,519	<b>{</b>	96 40 57.9	
46	64 5,519		96 42 17 1	
47	65 5,519	,, 5	96 43 36 2	
48	66 5,519	1 "	96 44 55.4 96 46 14.6	East of Roseau Ridge.
49 50	67 5,519 68 5,519	,,	96 47 33.8	West of Roseau Ridge.
51	69 5,519	79	96 48 52.9	
52	70 5,519	55	96 50 12 1	. ,
53	71 5,519		96 51 31.3	<b>{</b>
54 55	72 5,519 73 5,519	,,	96 52 50·5 96 54 09·6	
56	74 5,519	,,,	96 55 28.8	
57	75 5,519	,,	96 56 48	
58	76 5,519	,,	96 58 07.2	
<b>5</b> 9 <b>6</b> 0	77 5,519	"	96 59 26 3 97 00 45 5	
61	79 5,519	33	97 02 04.7	
62	80 5,519	,,	97 03 23.9	
63	81 5,519	,,,	97 01 43	
64	82 5.519	,,	97 06 02 2 97 07 21 4	· ·
65 66	83 5,519 84 5,519	31	97 08 40-6	West bank of Joe River.
67	85 5,519	25	97 09 59.7	West bank of soc itives.
68 '	86 5,519	"	97 11 18.9	
69	87 5,519	,,	97 12 38.1	East of Red River.
70 71	88 4,936 88 5,519	,,	97 13 51 5 97 13 57 3	Red River Astronomical Station.
72	89 5.519	27	97 15 16.4	
73	90, 5,519	"	97 16 35.6	•
74	91 , 5,519	,,	97 17 54.8	
75 76	92 5,519 93 5,519	] "   · · · · · · · · · · · · · · · · · ·	97 19 14:0 97 20 33:1	
77	94 5,519	22	97, 21 52.3	
, <b>7</b> 8	95 5,519	, ,,	97 23 11.5	Marais River.
79	96 5,519	.,,	97 24 30 7	
80 81	97 5,5 9 98 5,519	"	97 25 49·8 97 27 09	35
82	99 5,519	22	97 28 28 2	Manitoba principal Meridian.
83	100 5,519	,,	97 29 47.4	
84	101 5,519	,,	97 31 06 5	
85 86	102 5.519 103 5,519	**	97 32 25·7 97 33 44·9	
87	104 5,519	"	97 35 04.1	*
. 88	1.05 5,519	"	97 36 23.2	
89 90	106 5.519	"	97 37 42.4	
90 91	107 5,519 108 5,519	"	97 39 01 6	l a
92	109 5.519	2)	97 40 20 8 97 41 39 9	Grants, or Pointe Michel.
93	110 . 5,519	" "	97 42 59.1	
94 95	111 5,519	>> •• ••	97 44 18:3	
96	112 5,519 113 5,519	"	97 45 37.5	
97	114 6,319	"	97 46 56 6 97 48 23 7	
98	115 5.519	"	97 49 35:0	
99	116 5.519	"	97 50 54.1	
100	117 5,519 118 5,519	"	97 52 13-3	The state of the s
102	119 5,519	22 27 27 27 27 27 27 27 27 27 27 27 27 2	97 53 32·5 97 54 51 7	
103	120 5,519	"	97 56 10.9	
104	121 5,519	,	97 57 30	
.105 106	122 5,519 123 5,519	27	97 58 49 2	
107	124 5,519	**	98 00 08 4	Base of Pembina Mountain.
108	125 5,519	29 7	98 01 27 6 98 02 46 7	
109	128 5;519	27	98 04 05.9	
110 111	127 5,519 .128 5.519	"	98 05 25.1	*
112	129 5,519		98 06 44.3	
113	130 5,519	"	98 08 03·4 98 09 22:6	
114	131 5,519	,	98 10 41 8	

	Distance			Longitude	
No.		f Nature of Monument.		West of	Remarks.
	the Woods.	the second second	*	Greenwich.	
. —			<del></del>	ļ	
115.	Miles. Links 132 6,065	Iron pillar	•	0 11 11 2 00 10 00 F	, an
116		1 7	• • •	98 12 06 5 98 14 07 5	Near west bank of Pembina River. Top of ridge west of Pembina
	**\(\frac{1}{3}\).	27	• •	30 12 0, 0	River.
- 117	134 5,519	3)		98 14 39 3	
118	135 5,519	, , , , , , , , , , , , , , , , , , ,	. • •	98 15 58 5	Near United States' Astronomical
119	136 5,519			98 17 17.6	Station, No. 4.
120	137 5,519	25 **		98 18 36-8	
121	138 5,519	,,	••	98 19 56.0	
122 123	139 5,519 140 5,519	39	• • •	98 21 15 2 98 22 34 4	
124	141 5,519	29.		98 23 53 5	8/
125	142 5,519	.57	••	98 25 12.7	
126 . 127	143 5,519 144 5,519	,,	•••	98 26 31.9	
128	145 5,519			98 27 51·1 98 29 10·2	A State of the August 1999
129	146 5,519	299		98 30 29 4	-4:
130	147 5,519 148 5,519	,, ,	• • •	98 31 48.6	1
131 132	148 5,519 149 5,519	,,		98 33 07 8 98 34 26 9	East bank of large Coulé
133	150 5,519	))) · · · · · · · · · · · · · · · · · ·		98 35 46.1	Janes Danie of Image Courte.
134	151 5,519	,,	. • •	98 37 05.3	The state of the s
135 136	152 5,519 153 5,519	***	••	98 38 24·5 98 39 43·6	Near Coulé, east bank.
137	154: 5,519	), · · · · · · · · · · · · · · · · · · ·		98 41 02 8	Mear Coute, east bank.
138	155 5,519	35	• • •	98 42 22 0	· · · · · · · · · · · · · · · · · · ·
139 140	156 5,519 157 5,519	,,		98 43 41.1	
141	158 5,519	99		98 45 00·3 98 46 19·5	Near crossing of Half-Breed trail.
142	159 5,519	,,		98 47 38.7	
143	160 5,519° 161 5,519°		••	98 48 57:9	
144 145	161 5,519 162 5,519	99		98 50 17 98 51 36·2	
146	163 5,519	,,		98 52 55 4	
147	164 5,519 165 5,519	59	••	98 54 14 6	
148 149	165 5,519 166 5,519	. Ph n n h		98 55 33·7 98 56 52·9	
150	167 5,519.	,,		98 58 12.1	
151	168 5,519	,,,		98 59 31:3	777
152 153	169 420 169 5,519	99	::	99 00 00 99 00 50 <b>·4</b>	Western boundary of Manitoba.
154	170 5,519	Ft. Ft.		99 02 09.6	
155	170 6,998	Stone cairn, 13 × 7* 13 7*	••	99 02 24 2	•
156 157	172 7.154 175 7,662	1.9. 74		99 05 04·2 99 09 06·7	
158	176 5,485	,, 10 6*		99 10 04-3	
159	178 6,527	Earth mound, 16 7*	·•].	. 99 12 53	, , , , , , , , , , , , , , , , , , , ,
160 161	180 7,412 183 1,414	,, 16 7* ,, 10 5*	••	99 15 40·1 99 18 38·3	<b>(1)</b>
162	183 93,911	9 6*		99 19 03	Sleepy Hollow Astronomical
			- 1	·	Station.
163 164	186 3,911 189 1,228	9 6* 9 6*	. • *	99 23 00 5 99 26 31 5	
165	191 5,717	,, 9 6*		99 20 54.2	, •
166	195 1,272	9 6*	••	99 34 27	
167 168	198 3,911 201 7,911	9 6* 9 6*	••	99 38 50·6 99 43 27·7	
169	201 7,511	" 14. · 6*		99 46 04.2	Turtle Mountain East Astrono-
		, ten			mical Station.
170	206 7,729	,, 14 6* ,, 14 6*	••	99 50 01.8	
171 172	209 5,582 212 7,729	14 6*		99 53 38 99 57 56·8	
173	215 1,996	" 14 6 <del>*</del>		100 00 57:6	
174	218 7,729	,, 14. 6*		100 05 51.9	• *
175 176	221 7,248   224 7,729	,, 14 6* 14 6*		100 09 44·6 100 13 46:9	
177	227 6,470	,, 14 6*		100 17 32	
178	229 7,245	, 14 6	•••	100 20 18	East shore of Boundary Lake.
179	233 3,787	9 6 <del>*</del> 9 6*		100 25 05.5	High ridge east of Summit Lake.
180	235 2,660	,, 9, 6**		100 27 27:7	On slope of Turde Mountain, and outside of timber.
181	237 6,968	Stone cairn, 16 7*		100 30 48-7	East of Turtle Mountain, West
		(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	1	100 97 45-0	Astronomical Station.
182 183	248 1,114 247 649	16 7* 16 7*		100 37 45·8 100 42 57:9	
100 1	-x. par 1	,,			

			· ·						
•	No	. fro	Distance on Lake of ic Woods.	Nature	of Monun	ient.		Longitude West of Greenwich.	Remarks.
		30.7			77. Th.	·		0 1 #	
	104		les. Links.		Ft. Ft.	. *	- {	=	' '.'
	184 185			Stone cairn,		1		100 45 59.9	
	186			Earth mound,			•••	100 50 25·7 100 53 54	
	187		. 1	Stone,	16 7*			100 55 52.4	
	188			Earth mound,				100 55 22 4	
		_ } ~~`	, , , ,	Barra alouda,		ı	•	100 07 25 0	on west bank, Astronomical
	•			}	•		-		Station.
	189	261	1 744	,,	5 8*	•		101 01 27.3	
	190	264		, ,	5 8*			101 05 24.8	
	191			,,,	5 8*			101 09 22.3	
	192	270		,,,	5 8*			101 13 19-9	Right bank of South Antler
	7	}		1			-		Čreek.
	193	273	744	,,	5 8*			-101 17 17.4	Left ditto.
	194	276	744	,,	5 8*			101 21 14.9	
	195	279	744	,,	5 8*			101 25 12.4	
	196	281	1,973	Stone cairn,	10 5*		1	101 28 02.9	On prairie, near South Antler
		i	,		,				Creek.
	- 197	283		,,	15 6*	•		101 30 52.9	
٠	198	286		· ,,	15 6*			101 34 23.7	1
•	199	288		Earth mound,		•		101 37 56.8	
	200	291			15 6*			101 41 00 2	```
,	201	294		Earth mound,			]	101 46 08.9	
	202	297			12 6*		• •	101 49 151	
	203	300			12 6*			101 53 00.1	· ·
	204	301	5,152	,,	12 6	o.	••	101 54 57.9	East bank of Mouse River, near
	20-	000	. 7.1.0				[		road.
	205	303	7,150	Earth mound,	5 8 <b>*</b>		• •	101 57 56	Second crossing of Mouse River,
	206	ánc	. 7150.			•	l		Astronomical Station.
	207	306		31	5 8*		• •	102 01 53.6	
	208	312	•	', ,,	5 8*		••	102 05 51.1	
_	209	315	7,150	7,	5 8*		• •	102 09 53.8	East of Rivière des Lacs.
	210	319	398	"	5 8*		••	102 13 46.1	West of ditto.
	211	321	7,150	.6	5 8 <b>*</b> 5 8 <b>*</b>	. •	••	102 17 56	
	212	325	3,846	, ,	3 8* 4 6*	•		102 21 41.2	
	213	329	7.294	ا ما	8 6*			102, 26, 25.2	Astronomical Station.
	214	331	5,986	Earth mound, I			• } •	102 32 16	
•	215	334	5,167		8 6*			102 34 41.4	
	216	337	1,260	Earth mound, 1	.0 5*			102 38 30.8	
	217	340	1,291		0.5*		- 1	102 41 49.7	
	218	342	2,814	Earth mound, 1	3 6*			102 45 47 5 102 48 40 9	East bank of Coulé.
	219	343	2,892		9 6*	•	•	102 48 40 9	East bank of Short Creek.
		} .	-	<i>"</i>	٠.		.1	**************************************	British Astronomical Station,
	220	346	472	,, 1	2 6*	_	.)	102 53 34 4	Short Creek west branch.
	221	349	2,410	, 1	2 6*			102 57 51.1	
	222	352	4,392	,, 1:	2 6*			103 02 08-3	Near Half-breed Road, east bank
	. 000						4-	,	of Mouse River.
	223	356	770	., 1:			.1-	103 06 49.1	West of Mouse River.
	224	359	3,254	Stone, 1	2 5*			103 11 11.2	Third Mouse Astronomical
	00-	001	# aaa.		•			1	Station.
	$\begin{array}{c} 225 \\ 226 \end{array}$	361 364.	7,908	Earth mound; 1	8 8*			√03 14 35·7	
••	227	369	3,666	., 18			. 1	03 17 51.2	East of Mouse River.
•	228	372	336 4,136	, 10		-	. 1	103 23 54.1	West of Mouse River.
	229	374	5,825		6 6*	• •	.  ]	103 28 29 3	
	230	377	2,977 -	Stone, 15 Earth mound, 15	2 7*	• •	. 1	03 31 243	
	-,-		_,	Daren mound, 1:	2 6*	•	-  1	03 34 53 7	Grand Coteau. Astronomical
	231	379	7,417	,, 12	2 6		Ι.		Station base of Cotenu.
	232	382	4,013	,, 12				.03 38 16	
	233	385		, 12			٠ ;	03 41 39.8	
,	234	388	1,896 6,377					03 45 16:4	
	235	392	4,139	,, 12		••	1 1	03 49 58·2 03 54 52·8	
	236	395	4,462	,, 12		•	1 ;	03 58 53 5	
	237	398	6,241	,, 12		:	l î	04 03 08.6	
	238	400	4,925	,, 10	5		] î	04 05 34	1
	239		2,392	,, 10	5		i	04 09 06.4	Mid Coteau Astronomical Station.
	240	405	5,407	Stone, 10	5 .		1	04 12 14.6	
	241 242		6,966	"		مامر ا		04 15 08.4	East side of Large Coulé.
	I			Earth, 10	5		1	04 18 45.5	West side of Large Coule.
			0.411	,, 10	5	••	] 1	04 22 30.9	service coule.
				,, 10 Stone		• •	1	04 27 35	
		424	941		5		1	04 32 49.4	
	. 1					• •		04 36 34.7	والمستع المستع المعالم
			4,938	Earth, - 14	6		1	04 39 53 6	Big Muddy Astronomical Station.
			, - ,	. 14	0	` . · ·	1	04 43 50.2	Samuelle Station.
		•		•					

	<u></u>			
	D			
No.	Distance from Lake of	Nature of Monument.	Longitude	
140.	the Woods.	Ivature of Monument.	West of Greenwich.	Remarks.
•	the woods.		Greenwich.	
•	7577	7. 7.	0 1 11	
249	Miles. Links.			mark on the state of
250	432 1,370 435 3,035	Earth mound, 14 × 6	104 47 12·4 104 51 26·4	East of Pyramid Creek.
251	437 1,489	14 6	104 51 20 4	On west bluff of Pyramid Creek.
252	440 7,152	14	104 58 43	East of Big Muddy River.
253	444 5.081	", 14 6 ···	105 03 39 2	West of Big Muddy River.
254	447 5,311	Stone, 12 6	105 07 39	The state of the s
255	451 1,841	,, 10 5	105 12 21 4	Bully Spring, United States
,				Astronomical Station, No. 11.
256	451 4,321		105 12 45.9	
257	454 4,541	Earth mound, 10 5	105 16 45 6	
258	457 5,874	, 10 5 10 5	105 20 56.3	To a buse 2 mellom
259 - 260	460 5.841 464 4.632	10.	105 24 53·5 105 29 58·3	In a broad valley.
261	467 4,826	10 5	105 25 58 5	
262	472 732	" 10 5	105 39 53 1	In valley of Poplar River.
263	473 3,454	,, 14 6	105 41 39.2	Poplar River Astronomical
•			1. 1. 1. 1.	Station.
264	476 3,454	,, 14 6	105 45 36.7	The state of the s
265	479 3,332	,, 14 6	105 49 33	
266	482 3,454	, 14 6	105 53 31.8	
267	485 3,454	, 14 6	105 57 29 3	
268	488 3,454	" 14 6	106 01 26 8	
269	491 2,054	" 14 6 ·	106 05 10.5	
270	494 3,454	,, 14 6 Stone 15 6*	106 09 21.8	Wrat Danlan Diman Assessmental
271	496 6,906	Stone, 15 6*	106 12 34.3	West Poplar River Astronomical Station.
+ 272	498 6,821	Earth mound, 12 7*	106 15 11.9	Dation.
273	501 1,299	10 7#	106 18 14 7	,
274	502 7,391	", 12 7°	106 20 34 2	On edge of west branch of Poplar
	"	"		River.
275	505 356	,, 12 7*	106 23 22 1	
276	510 170	,, 12 7*	106 29 56 1	
277	511 1,061	Stone, 10 6*	106 31 24 1	
278	514 1,239	,, 10 6*	106 35 23.4	
279	518 3,641	Earth mound, 12 7*	106 41 03.9	T 471.1 D 1 G 1
280	520 7,605	Stone, 10 6*	106 44 21 5	East of Little Rocky Creek.
281	522 4,742	Earth mound, 14 6*	106 46 31.5	Little Rocky Creek Astronomical Station, west of Creek.
282	525 3,103	Stone, 10 6*	106 50 12.8	Station, west of Oreex.
283	528 764	10 6*	106 53 47.2	
284	531 2,323	10 2*	106 58 00 1	
285	534 7,642	;; 10 6*	107 02 50 3	
286	537 1,010	. 10 6*	107 05 42.2	
287	541 7,704	,, 10 6*	107 12 05 1	On east bluff of Frenchman's
				Creek.
288	544 7,513	Earth mound, 12 6*	107 16 00 8	
289	548 3,375	Stone, 10 6*	107 20 36.5	On west bluff of Frenchman's
000	550 0540	10 0*	107 00 40-0	Creek. Frenchman's Creek Astronomical
290	550 6,740	,, 10 6*	107 23 48 2	Station.
291	553 1,607	10 6*		Near Lake.
291 292	557 2,460	70 0	107 32 20	arem amine.
292 293	560 3,708	10 6#	107 36 29 9	
294	563 2,270	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	107 40 13 2	
295	565 2,322	" 10 6*	107 42 52.1	
296	567 3,881	12 6*	107 45 45 8	Cottonwood Coulé Astronomical
				Station.
297	570 3.891	" 12 6 <del>*†</del>	107 49 43 4	والمرازي والمناب والمستفيلين
298	573 3,881		107 53 40.9	On most keels of Carrier 1
299	576 3,881		107 57 38 4	On west bank of Cottonwood Coulé.
300	579 3,881		108 01 35.9	Coule.
301	582 3,881		108 05 33.5	
302			108 09 31	
303	585 3,881 588 1,931	10 6*	108 13 09 2	Pool on Prairie, Astronomical
				Station.
304	591 6,187		108 17 48 8	
305	596 5,787	1	108 24 20 8	
306	599 228	and the same of th	108 27 23 3	
307	601 2,182	., 10 6*	108 30 21	
308	605 6,789		108 36 28 3	
309	608 6,593	10 6*	108 40 18 9	
310	613 378	10 6* 12 6*	108 45 53·2 108 48 59 5	Near Goose Lake Astronom cal
311	615 3,202	,, 12 0		Station.
	[615]			C
- H 3.	[nra]			
·				the first of the state of the terms

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			1	,				
		Distance			_		Longitude	
No		m Lake of	N	lature of l	Lonumen	t.	West of	Remarks.
	th	e Woods.	1				Greenwich	1.
	-{		-					
	Mil	es. Links.	1	$\mathbf{F}$ t.			■ A A	
312	618		Stone,	10	× 6*			
313	- ≸ 621	1,085	,,	. 10	6 <b>*</b>			
314		,	,,	10	6*	•		
315			33.	` 10				3
316			,,	10	6*	•	. 109 08 59	. \
317	682	_, _,	"	10	. 6*	•	.] 109 11 33-4	
318	.63	3 > 4,459 {	Stone a	nd 10	6*		109 15 35-5	
-319	<b>√</b> E	,	earth n	nouno j	• ,	•	1	\· \·
320			Stone,	10	6 <b>*</b> 6 <b>*</b>	•	109 20 49-1	
020	042	218	"	10	· 0	•	109 24.07	
321	648	6,856	1	10	6*		109 26 32-6	in river bottom.
322			} "	10	6 <b>*</b>		100.00.46	
323		,	11	10	6*	. •	1 100 00 00.0	
3:24			Eurth m	ound, 12	7*		100 20 00.0	
325			Stone,	10	6 <b>*†</b>	•	100 41 90.0	1
	{	•	,	٠,	- 1		}	in river bottom.
326	658	2,357	,,,	10	6*†		109 45 35-7	
<b>3</b> 27	661	2,357	33	10	6*†		109 49 33.2	
328	664	2,357	,,	10	6*†	•	109 53 30-7	
329	667	2,357	,,	10	6*		1 100 50 000	
330	670		,,	10	6*†		1 110 01 05.0	1
331	673	2,357	,,	10	6 <b>*</b> †		110 05 23 3	
332	677	281	,,	,10	8*		110 10 19-5	Milk River Lake Astronomical
	1	_	{	_	• •			Station.
333	680	497 {	Earth an	d 310	6* ¯		110 14 19.1	
004	1		stone m	ound 10	1.	.**	1 .	•
334 335	683	1,144	( ^"	~~	6*			
836	685	5,545	Stone,	10	6*		110 21 45	
337	699	3.677	29	. 10	6*	•:	110 39 54.9	
001	702	3,023	72	12	6*	,	110 43 46	West of Milk River Astronomical
338	705	7,527	•	10	C#		1.770 40 00 7	Station.
339	708	3,204	<b>33</b>	10.	6*	• •	110 48 28 1	
340	711	3,444	**	10	6 <b>*</b> 6*		110 51 42-8	On west bank of Large Coulé.
341	714	2 412	99	. 10		• •	110 55 42.7	
342	717	7,848	. "	. 10	6*. 6* ,	* * *	110 59 30	
343	720	5,550	, ,,	10	6*	• •	111 04 21-3	
344	723	383	"	10 10	6*	• •	111 07 56 1	On crest of spur.
	1		<b>"</b>	, 10	D.	• • •	111 11 02-5	Mound on west slope of spur of
345	726	4,094	, ,,	10	6*		111 15 35 8	East Butte.
346	730	573	,,	. 10	6* '	• •	111 20 18-6	
347	734	724	33	10	7*	••	111 25 36.8	
-348	738	5,383	33	14	8*	` ••	111 31 39-6	Foot of West Date
849	740	197	23	10	6*†	• :	111 33 26.6	East of West Butte. West of West Butte.
<b>3</b> 50	743	6,392	. "	10	6*†	• • •	111 37 06 3	West of West Butte.
351	745	6,377	<b>3</b> 7	10	6*+		111 41 03.7	· .
852	748	6,766	79		6*+		111 45 05 1	Near Creek.
353	751	5 770	73	10	6*+	• •	111 48 52-7	Lvear Creek.
354	754	5,770	23	10	6 <b>*</b> +		111 52 50.2	<b>,</b> , ,
355	757	7,524	77	10	6 <b>*</b> †		111 57 05.1	,
356	760	3,160	;,	10 -	6*		112 00 19 5	Red Creek Astronomical Station.
357	763	7,188	"	10	6 <b>*</b>		112 04 56:8	East of Red Creek, near Whoop-
0.00	700	2000			· -	į	•	up Trail.
358 359	768	2,493	, 31	10	6#	}	112 10 46.3	1
	771	4,268	,21	10	6 <b>*</b>	}	112 15 014	
360 361	774	4,353	"	, 10	6*	· ,••{	112 18 59.7	
362	779	2,061	, <b>35</b>	10	6#		112 22 346	
<b>3</b> 63	781	6,772	, ,,	10	6*		112 25 19	
364	785 -		J1	10	6*		. 112 28 3749	
	1		**	12	6*	• ••	112 32 50.3	South branch Milk River. Astro-
365	787	6,221		· 10	<b>6*</b> .	{	110 00 **	nomical Station on west bank:
366	790	7,610	**	· 10	6*	••{	112 36 27.5	
367	793	7,613	35	10	6*	• • • }	112 40 38 7	
368	798	2,305	>>	10	6* .	••{	112 44 36.3	
369	801	3,201	13	10	6*	•-	112 50 19.6	
370	804	3,361	***	10	6* ·	•••	112-54 26	Transport of the state of the s
- ;		(	."	10			112 58 25.1	East Bluff, north branch of Milk
871	807	6,209	"	10	6≉	. 1	113 02 50.8	Miver. Astronomical Station
372	811	2,846	"	10.	6*		113 02 30 8	On Milk River ridge.
373	8.5	319	"	10	6#	* **	113 12 26	In valley.
374	817	7,258	23 '	10	6*	• •	113 16 13	On high ridge.
875	20	4.680	<b>"</b>	10	6*	}	113 10 13	East of St. Mary's River.
376 I	824	3,946	** **	10	6 <b>*</b> ·	•	113 94 54:4	West of St. Mary's River.

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No.	Distance from Lake of the Woods.	Nature of Monument.	Longitude We-t of Greenwich.	Remarks.
377	Miles. Links. 825 6,138	Stone, Ft. Ft	113 26 35·3	Rocky Mountain. Astronomical
378 379 380 381	828 6,483 831 2,653 836 3,385 846 240	,, 10 6*+ ,, 10 6* ,, 12 6* ,, 12 6*	113 30 36·2 113 33 59·9 113 40 39 113 53 19·6	Station near lake.  Belly River Astronomical Station.
, , ,	853 2,529	7 6	114 02 56 5	Chief Mountain Lake Astronomical Station. Summit of Rocky Mountains, 1861.

(Signed)

D. R. CAMERON, Major, R.A., Her Britannic Majesty's Commissioner.

ARCHIBALD CAMPBELL, United States'

W. J. TWINING, Captain of Engineers, United States' Chief. Astronomer.

S. ANDERSON, Captain, R.E., British Chief Astronomer.

May 29, 1876.

Inclosure 3.

(c.) A Set of Twenty-four Maps.\*

#### Inclosure 4.

(n.)—Record of Proceedings at a meeting of the Commissioners appointed respectively by Her Britannic Majesty and by the President of the United States of America, to ascertain and mark the boundary line between the respective territories of Her Majesty and of the United States, the said line being that defined by the 2nd Article of the Convention of London, signed 20th October, 1818:

#### Present:

- Donald R. Cameron, Major, Royal Artillery, Commissioner on the part of Her Britannic Majesty.
- S. Anderson, Captain Royal Engineers, Chief Astronomer to Her Majesty's Commission.
- A. C. WARD, Captain Royal Engineers, Secretary to Her Majesty's Commission.
- ARCHIBALD CAMPBELL, Commissioner on the part of the United States of America.
- W. J. TWINING, Captain of the Corps of Engineers of the United States' Army, Chief Astronomer to the United States' Commission.

1. THE Chief Astronomers submit the following documents and maps:

- (a) A detailed list, in duplicate, of forty astronomical stations in addition to one for the location of the most north-western point of the Lake of the Woods, at which observations were taken under their superintendence to determine the line described in the 2nd Article of the Convention of London (signed 20th October, 1818) between the terminal points, viz., the most north-western point of the Lake of the Woods and the eastern end of the international boundary line, previously-marked between Akamina, in the Rocky Mountains, and the western coast of North America.
- (b.) A descriptive list, in duplicate, of 388 monuments and marks placed on the boundary line, as derived from the astronomical stations enumerated in the list referred to in section (a) of this paragraph.
  - (c.) A duplicate set of 24 maps,\* on a scale of  $\frac{1}{126720}$ ths, or 1 inch to 2 miles,

illustrating the topography of the country through which the boundary line runs, and indicating the relative positions of the various monuments and marks referred to in section (b) of this paragraph.

2. The 2nd Article of the Convention of London, signed 20th October, 1818, is

read as follows:-

"It is agreed that a line drawn from the most north-western point of the Lake of the Woods, along the 49th parallel of north latitude, or, if the said point shall not be in the 49th parallel of north latitude, then that a line drawn from the said point due north or south, as the case may be, until the said line shall intersect the said parallel of north latitude, and from the point of such intersection due west along and with the said parallel, shall be the line of demarcation between the territories of His Britannic Majesty and those of the United States, and that the said line shall form the southern boundary of the said territories of His Britannic Majesty, and the northern boundary of the territories of the United States, from the Lake of the Woods to the Stony Mountains."

3. The duplicate documents and maps enumerated in paragraph numbered (1)—one set for each of the respective Governments—having been examined and compared, are authenticated by the signatures of the Commissioners, who agree as

follows:--

- (1.) The 388 monuments detailed in the list referred to in section (b) of paragraph numbered 1, are on and mark the astronomical lines stipulated by the 2nd Article of the Convention of London (signed 20th October, 1818), to be the line of boundary between the territories of Her Britannic Majesty and of the United States of America, from the Lake of the Woods to the Stony (i.e., Rocky) Mountains.
- (2.) In the intervals between the monuments along the parallel of latitude it is agreed that the line has the curvature of a parallel of 49° north latitude, and that such characteristic shall determine all questions that may hereafter arise with reference to the position of the boundary at any point between neighbouring monuments.
- (3.) It is further agreed that, in the event of any of the said 388 monuments or marks being obliterated beyond the power of recognition, the lost site or sites shall be recovered by their recorded position relatively to the next neighbouring unobliterated mark or marks.

(Signed)

D. R. CAMERON, Major, R.A., Her Britannic Majesty's Commissioner. ARCHIBALD CAMPBELL, United States' Commissioner.

London, May 29, 1876.



NORTH AMERICA. No. 8 (1876).

FURTHER CORRESPONDENCE respecting the Determination of the Boundary between Canada and the United States.

(In continuation of "North America No. 1, 1875.")

Presented to both Houses of Parliament by Command of Her Majesty. 1876.

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